

SEQUENCE LISTING

<110> Lawn, Richard M.
Wade, David
Garvin, Michael
Oram, John F.

<120> Compositions and Methods for Increasing Cholesterol
Efflux and Raising HDL using ATP Binding Cassette
Transporter Protein ABC1

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<150> US 60/140,264

<151> 1999-06-18

<150> US 60/153,872

<151> 1999-08-14

<150> US 60/166,573

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<170> PatentIn Ver. 2.0

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13

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1880

1885

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130

140

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Asn Leu Ser Leu Pro Lys Ser Thr Val Asp Lys Met Leu Arg Ala Asp
 165 170 175

Val Ile Leu His Lys Val Phe Leu Gln Gly Tyr Gln Leu His Leu Thr
 180 185 190

Ser Leu Cys Asn Gly Ser Lys Ser Glu Glu Met Ile Gln Leu Gly Asp
 195 200 205

Gln Glu Val Ser Glu Leu Cys Gly Leu Pro Lys Glu Lys Leu Ala Ala
 210 215 220

Ala Glu Arg Val Leu Arg Ser Asn Met Asp Ile Leu Lys Pro Ile Leu
 225 230 235 240

Arg Thr Leu Asn Ser Thr Ser Pro Phe Pro Ser Lys Glu Leu Ala Glu
 245 250 255

Ala Thr Lys Thr Leu Leu His Ser Leu Gly Thr Leu Ala Gln Glu Leu
 260 265 270

Phe Ser Met Arg Ser Trp Ser Asp Met Arg Gln Glu Val Met Phe Leu
 275 280 285

Thr Asn Val Asn Ser Ser Ser Ser Ser Thr Gln Ile Tyr Gln Ala Val
 290 295 300

Ser Arg Ile Val Cys Gly His Pro Glu Gly Gly Gly Leu Lys Ile Lys
 305 310 315 320

Ser Leu Asn Trp Tyr Glu Asp Asn Asn Tyr Lys Ala Leu Phe Gly Gly
 325 330 335

Asn Gly Thr Glu Glu Asp Ala Glu Thr Phe Tyr Asp Asn Ser Thr Thr
 340 345 350

Pro Tyr Cys Asn Asp Leu Met Lys Asn Leu Glu Ser Ser Pro Leu Ser
 355 360 365

Arg Ile Ile Trp Lys Ala Leu Lys Pro Leu Leu Val Gly Lys Ile Leu
 370 375 380

Tyr Thr Pro Asp Thr Pro Ala Thr Arg Gln Val Met Ala Glu Val Asn

385

390

395

400

Lys Thr Phe Gln Glu Leu Ala Val Phe His Asp Leu Glu Gly Met Trp
 405 410 415

Glu Glu Leu Ser Pro Lys Ile Trp Thr Phe Met Glu Asn Ser Gln Glu
 420 425 430

Met Asp Leu Val Arg Met Leu Leu Asp Ser Arg Asp Asn Asp His Phe
 435 440 445

Trp Glu Gln Gln Leu Asp Gly Leu Asp Trp Thr Ala Gln Asp Ile Val
 450 455 460

Ala Phe Leu Ala Lys His Pro Glu Asp Val Gln Ser Ser Asn Gly Ser
 465 470 475 480

Val Tyr Thr Trp Arg Glu Ala Phe Asn Glu Thr Asn Gln Ala Ile Arg
 485 490 495

Thr Ile Ser Arg Phe Met Glu Cys Val Asn Leu Asn Lys Leu Glu Pro
 500 505 510

Ile Ala Thr Glu Val Trp Leu Ile Asn Lys Ser Met Glu Leu Leu Asp
 515 520 525

Glu Arg Lys Phe Trp Ala Gly Ile Val Phe Thr Gly Ile Thr Pro Gly
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Ser Ile Glu Leu Pro His His Val Lys Tyr Lys Ile Arg Met Asp Ile
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Asp Asn Val Glu Arg Thr Asn Lys Ile Lys Asp Gly Tyr Trp Asp Pro
 565 570 575

Gly Pro Arg Ala Asp Pro Phe Glu Asp Met Trp Tyr Val Trp Gly Gly
 580 585 590

Phe Ala Tyr Leu Gln Asp Val Val Glu Gln Ala Ile Ile Arg Val Leu
 595 600 605

Thr Gly Thr Glu Lys Lys Thr Gly Val Tyr Met Gln Gln Met Pro Tyr
 610 615 620

Pro Cys Tyr Val Asp Asp Ile Phe Leu Arg Val Met Ser Arg Ser Met
 625 630 635 640

Pro Leu Phe Met Thr Leu Ala Trp Ile Tyr Ser Val Ala Val Ile Ile

645

650

655

Lys Gly Ile Val Tyr Glu Lys Glu Ala Arg Leu Lys Glu Thr Met Arg
660 665 670

Ile Met Gly Leu Asp Asn Ser Ile Leu Trp Phe Ser Trp Phe Ile Ser
675 680 685

Ser Leu Ile Pro Leu Leu Val Ser Ala Gly Leu Leu Val Val Ile Leu
690 695 700

Lys Leu Gly Asn Leu Leu Pro Tyr Ser Asp Pro Ser Val Val Phe Val
705 710 715 720

Phe Leu Ser Val Phe Ala Val Val Thr Ile Leu Gln Cys Phe Leu Ile
725 730 735

Ser Thr Leu Phe Ser Arg Ala Asn Leu Ala Ala Ala Cys Gly Gly Ile
740 745 750

Ile Tyr Phe Thr Leu Tyr Leu Pro Tyr Val Leu Cys Val Ala Trp Gln
755 760 765

Asp Tyr Val Gly Phe Thr Leu Lys Ile Phe Ala Ser Leu Leu Ser Pro
770 775 780

Val Ala Phe Gly Phe Gly Cys Glu Tyr Phe Ala Leu Phe Glu Glu Gln
785 790 795 800

Gly Ile Gly Val Gln Trp Asp Asn Leu Phe Glu Ser Pro Val Glu Glu
805 810 815

Asp Gly Phe Asn Leu Thr Thr Ser Ile Ser Met Met Leu Phe Asp Thr
820 825 830

Phe Leu Tyr Gly Val Met Thr Trp Tyr Ile Glu Ala Val Phe Pro Gly
835 840 845

Gln Tyr Gly Ile Pro Arg Pro Trp Tyr Phe Pro Cys Thr Lys Ser Tyr
850 855 860

Trp Phe Gly Glu Glu Ser Asp Glu Lys Ser His Pro Gly Ser Asn Gln
865 870 875 880

Lys Arg Met Ser Glu Ile Cys Met Glu Glu Glu Pro Thr His Leu Lys
885 890 895

Leu Gly Val Ser Ile Gln Asn Leu Val Lys Val Tyr Arg Asp Gly Met

900

905

910

Lys Val Ala Val Asp Gly Leu Ala Leu Asn Phe Tyr Glu Gly Gln Ile
 915 920 925

Thr Ser Phe Leu Gly His Asn Gly Ala Gly Lys Thr Thr Thr Met Ser
 930 935 940

Ile Leu Thr Gly Leu Phe Pro Pro Thr Ser Gly Thr Ala Tyr Ile Leu
 945 950 955 960

Gly Lys Asp Ile Arg Ser Glu Met Ser Thr Ile Arg Gln Asn Leu Gly
 965 970 975

Val Cys Pro Gln His Asn Val Leu Phe Asp Met Leu Thr Val Glu Glu
 980 985 990

His Ile Trp Phe Tyr Ala Arg Leu Lys Gly Leu Ser Glu Lys His Val
 995 1000 1005

Lys Ala Glu Met Glu Gln Met Ala Leu Asp Val Gly Leu Pro Ser Ser
 1010 1015 1020

Lys Leu Lys Ser Lys Thr Ser Gln Leu Ser Gly Gly Met Gln Arg Lys
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Leu Ser Val Ala Leu Ala Phe Val Gly Gly Ser Lys Val Val Ile Leu
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Asp Glu Pro Thr Ala Gly Val Asp Pro Tyr Ser Arg Arg Gly Ile Trp
 1060 1065 1070

Glu Leu Leu Leu Lys Tyr Arg Gln Gly Arg Thr Ile Ile Leu Ser Thr
 1075 1080 1085

His His Met Asp Glu Ala Asp Val Leu Gly Asp Arg Ile Ala Ile Ile
 1090 1095 1100

Ser His Gly Lys Leu Cys Cys Val Gly Ser Ser Leu Phe Leu Lys Asn
 1105 1110 1115 1120

Gln Leu Gly Thr Gly Tyr Tyr Leu Thr Leu Val Lys Lys Asp Val Glu
 1125 1130 1135

Ser Ser Leu Ser Ser Cys Arg Asn Ser Ser Ser Thr Val Ser Tyr Leu
 1140 1145 1150

Lys Lys Glu Asp Ser Val Ser Gln Ser Ser Ser Asp Ala Gly Leu Gly

680

Tyr Arg Arg Lys Arg Lys Pro Ala Val Asp Arg Ile Cys Val Gly Ile

1925

1930

1935

Pro Pro Gly Glu Cys Phe Gly Leu Leu Gly Val Asn Gly Ala Gly Lys
1940 1945 1950

Ser Ser Thr Phe Lys Met Leu Thr Gly Asp Thr Thr Val Thr Arg Gly
1955 1960 1965

Asp Ala Phe Leu Asn Lys Asn Ser Ile Leu Ser Asn Ile His Glu Val
1970 1975 1980

His Gln Asn Met Gly Tyr Cys Pro Gln Phe Asp Ala Ile Thr Glu Leu
1985 1990 1995 2000

Leu Thr Gly Arg Glu His Val Glu Phe Phe Ala Leu Leu Arg Gly Val
2005 2010 2015

Pro Glu Lys Glu Val Gly Lys Val Gly Glu Trp Ala Ile Arg Lys Leu
2020 2025 2030

Gly Leu Val Lys Tyr Gly Glu Lys Tyr Ala Gly Asn Tyr Ser Gly Gly
2035 2040 2045

Asn Lys Arg Lys Leu Ser Thr Ala Met Ala Leu Ile Gly Gly Pro Pro
2050 2055 2060

Val Val Phe Leu Asp Glu Pro Thr Thr Gly Met Asp Pro Lys Ala Arg
2065 2070 2075 2080

Arg Phe Leu Trp Asn Cys Ala Leu Ser Val Val Lys Glu Gly Arg Ser
2085 2090 2095

Val Val Leu Thr Ser His Ser Met Glu Glu Cys Glu Ala Leu Cys Thr
2100 2105 2110

Arg Met Ala Ile Met Val Asn Gly Arg Phe Arg Cys Leu Gly Ser Val
2115 2120 2125

Gln His Leu Lys Asn Arg Phe Gly Asp Gly Tyr Thr Ile Val Val Arg
2130 2135 2140

Ile Ala Gly Ser Asn Pro Asp Leu Lys Pro Val Gln Asp Phe Phe Gly
2145 2150 2155 2160

Leu Ala Phe Pro Gly Ser Val Leu Lys Glu Lys His Arg Asn Met Leu
2165 2170 2175

Gln Tyr Gln Leu Pro Ser Ser Leu Ser Ser Leu Ala Arg Ile Phe Ser

2190

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<223> Description of Artificial Sequence: ABC1 RT-PCR
primer

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<223> Description of Artificial Sequence: ABC1 RT-PCR
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<210> 20

<211> 18

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<213> Artificial Sequence

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<223> Description of Artificial Sequence: ABC1
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agtgacatgc gacaggag

18

<210> 21

<211> 18

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<223> Description of Artificial Sequence: ABC1
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<400> 21

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<210> 22

<211> 18

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<210> 23

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<223> Description of Artificial Sequence: ABC1
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<211> 19

<212> DNA

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<223> Description of Artificial Sequence: ABC1
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<210> 26

<211> 18

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<223> Description of Artificial Sequence: ABC1
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<210> 36

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<223> Description of Artificial Sequence: ABC1
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sequencing primer

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18

<210> 38
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sequencing primer

<400> 38
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19

<210> 39
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sequencing primer

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<210> 40
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<213> Artificial Sequence

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<223> Description of Artificial Sequence: ABC1
sequencing primer

<400> 40
gtttcttcat ttgtttga

18

<210> 41
<211> 18
<212> DNA
<213> Artificial Sequence

<220>

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<223> Description of Artificial Sequence: ABC1
sequencing primer

<400> 41
agggcgtgct tgggattg

18

<210> 42
<211> 18
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<213> Artificial Sequence

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<223> Description of Artificial Sequence: ABC1
sequencing primer

<400> 42
cagaatcatt tggatcag

18

<210> 43
<211> 18
<212> DNA
<213> Artificial Sequence

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<223> Description of Artificial Sequence: ABC1
sequencing primer

<400> 43

catcagaact gctctgag

18

<210> 44

<211> 19

<212> DNA

<213> Artificial Sequence

<220>

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<223> Description of Artificial Sequence: ABC1
sequencing primer

<400> 44

agctggcttg ttttgcttt

19

<210> 45

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

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<223> Description of Artificial Sequence: ABC1
sequencing primer

<400> 45

tggacacgcc cagcttca

18

<210> 46

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

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<223> Description of Artificial Sequence: ABC1
sequencing primer

<400> 46

cctgccatgc cacacaca

18

<210> 47

<211> 18

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<213> Artificial Sequence

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<223> Description of Artificial Sequence: ABC1
sequencing primer

<400> 47

ctcatcaccc gcagaaag

18

<210> 48

<211> 18

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: ABC1
sequencing primer

<400> 48

cacactccat gaagcgag

18

<210> 49

<211> 18

<212> DNA

<213> Artificial Sequence

<220>

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<223> Description of Artificial Sequence: ABC1
sequencing primer

<400> 49

tccagataat gcgggaaa

18

<210> 50

<211> 18

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: ABC1
sequencing primer

<400> 50

tcaggattgg cttcagga

18

<210> 51

<211> 21

<212> DNA

<213> Artificial Sequence

<220>

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<223> Description of Artificial Sequence: ABC1
sequencing primer

<400> 51

aagtttgagc tggatttctt g

21

<210> 52

<211> 25

<212> DNA

<213> Artificial Sequence

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<223> Description of Artificial Sequence: beta-globin
antisense oligonucleotide

<400> 52

cctcttacct cagttacaat ttata

25

<210> 53

<211> 26

<212> DNA

<213> Artificial Sequence

<220>

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<223> Description of Artificial Sequence: ABC1 antisense
oligonucleotide

<400> 53
catgttggttc ataggggtggg tagctc

26

<210> 54
<211> 24
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<223> Description of Artificial Sequence: beta-actin
amplification primer

<400> 54
tcacccacac tgtgccatct acga

24

<210> 55
<211> 25
<212> DNA
<213> Artificial Sequence

<220>

<220>

<223> Description of Artificial Sequence: beta-actin
amplification primer

<400> 55
cagcgggaacc gctcattgcc aatgg

25

<210> 56
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<220>

<220>

<223> Description of Artificial Sequence: sterol
response element oligonucleotide

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tcgagtgacc gatagtaacc tctcga

26

<210> 57
<211> 26

<212> DNA

<213> Artificial Sequence

<220>

<220>

<223> Description of Artificial Sequence: mutated sterol
response element oligonucleotide

<400> 57

tcgagctgca catagtaacc tctcga

26

SUB A1
cont

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